

### REMARKS

In response to the Final Office Action dated September 3, 2010, and the Advisory Action dated November 26, 2010, Applicants submit the following remarks along with a Request for Continued Examination (RCE). Claims 2-5, 7, 10, 11, 13-19, and 29 remain pending in the present application. Claims 2-5, 7, 10, 11, 13, and 29 have been amended. Reexamination and reconsideration of claims 2-5, 7, 10, 11, 13-19, and 29 is respectfully requested in view of the RCE and remarks that follow.

#### **Specification**

The specification has been amended to claim priority to the U.S. Provisional Application No. 60/421,736. As indicated, the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), and is now being submitted in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification.

#### **Claim Objections**

Claims 2-5, 7, 10 and 11 were objected to because the preamble did not match the parent claim. The claims have been amended to correct the preamble issue. Accordingly, Applicants request the withdrawal of the objection.

#### **Claim Rejections - 35 U.S.C. § 103**

Claims 2-5, 10-11, 13-19, and 29 were again rejected under 35 USC 103(a) as being unpatentable over US Patent No. 7,020,578 to Sorensen et al. (hereinafter "Sorensen").

Independent claims 13 and 29 have been amended to further define the invention. Specifically, amended claims 13 and 29 are drawn to, among other things, a hazard atlas comprising a plurality of voxels, each voxel representing a hazard value of an extent of deficit caused by damage from the disorder to that voxel of tissue at a specific location, such that the hazard value contains location specific information about the impact that the voxel's death would have on behavior; obtain from the memory or computer-readable medium the hazard atlas of the disorder; and compute a hazard score for the patient, wherein the score is the integration of all damaged patient image voxels weighted by the hazard value corresponding to that voxel location.

As previously argued, the signature maps or risk maps of Sorensen describe a method of assigning a voxel-by-voxel risk of tissue death in the future (see col. 2, lines 13-16). The hazard atlas of the instant application, on the other hand, improves upon the risk map information mathematically with location specific information (i.e., forming the "atlas") about the impact that a

given voxel's death would have on behavior, as claimed in amended claims 13 and 29. Thus, the hazard atlas requires something more than the risk map -- it requires an atlas of the brain, a location-by-location quantitative description of value to the patient. In addition, the risk map of Sorensen is per person, where the hazard atlas is per disorder.

The Office Action identifies col. 5, lines 5-22 and line 44-67 as reading on a hazard atlas comprising a plurality of voxels, each voxel representing a hazard value of an extent of deficit caused by damage from the disorder to that voxel of tissue at that location. Nowhere in Sorensen does it describe a hazard value containing location specific information about the impact that the voxel's death would have on behavior. Instead, Sorensen teaches obtaining image data from a patient within a predetermined amount of time from symptom onset in order to generate the risk map (see col. 3, lines 35-38).

Accordingly, Applicants request the withdrawal of the rejection of independent claims 13 and 29, and the claims that depend therefrom.

If the Examiner believes questions or matters of clarification remain, or if the Examiner has any comments or suggestions which could place this application in even better form to expedite allowance, such matters can be handled by an in person or telephonic interview to advance prosecution of this case and the Examiner is invited to contact the undersigned. The Applicants remain committed to proceed on this basis.

It is respectfully submitted that this amendment places this application into condition for allowance. A one month extension fee is being paid in conjunction with this response. Although no additional fees are believed due for filing this response, however, please charge any fees that may be due, or credit any overpayment, to Deposit Account No. 17-0055.

Respectfully submitted,  
GREGORY SORENSEN et al.

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